

**SELF-ASSESSMENT OF HIGHER EDUCATION DEGREES AND ORGANISATIONAL
LEARNING: AN EXPLORATORY STUDY**

GUEVARA-AGÜERO, MIGUEL A.
Technological Institute of Costa Rica
Department of Technical Education
P.O. Box: 159-7050
Cartago (Costa Rica)
E-mail: miguevara@itcr.ac.cr

FRANCISCO BALBASTRE-BENAVENT
University of Valencia
Department of Business Management
Avda. Tarongers, s/n
46022
Valencia (Spain)
E-mail: Francisco.Balbastre@uv.es

CANET-GINER , M. TERESA
University of Valencia
Department of Business Management
Avda. Tarongers, s/n
46022
Valencia (Spain)
E-mail: Teresa.Canet@uv.es

Abstract: Quality and the way through which it is managed are becoming of utmost importance in today's competitive environments. Initially, this phenomenon was mainly affecting the industrial sectors. Nevertheless, in this day and age service organisations are also influenced. In this respect, education organisations (EO) are not an exception.

Sometimes, the application of quality in EO may be spurred by an external factor. It is also the case of countries such as Costa Rica, a rich and developed Centro American country with a higher education system very influenced by the U.S.A. educational system and structures. In this context, self-assessment of higher education studies emerges as a way of improving the competitive capability of EO to face up to external pressures. Self-assessment of higher education studies allows higher EO to continuously question and improve their management practices and, as a result, the products/services they are offering. Nevertheless, if universities wish to achieve such a level of excellence it is fundamental that an organisational learning process takes place.

The main objective of this research is to analyse those factors that, a priori, may facilitate and/or hinder the process of organisational learning within a context of self-assessment of higher education degrees. In addition, we will try to identify how both processes, self-assessment and learning, are related one to each other.

We have selected one unique case (a higher education degree). The selected case is the Degree of Agronomy Engineering of the TICR (Technological Institute of Costa Rica). The analysis reveals some factors that may act both as facilitators or obstacles to the organisational learning process. Nevertheless, the decision of the organisation and continuous development of people have always appeared as enablers of the process, whereas the organisational structure has tended to slow down the organisational learning process in the studied degree. In any case, this work needs further research to be developed, both quantitative and qualitative, but it represents a first and rigorous attempt to shed a bit of light into this, up to now, unexplored research field.

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1.- Introduction

Nowadays, companies have to face up to the challenges derived from an increasing competitive and demanding environment. Higher education organisations are not an exception and, as many other organisations, they are employing quality management programmes as a strategic response. In this respect, higher education organisations are progressively implementing systems, policies and processes in order to focus all their activities as well as their products and services to try to exceed the requirements and needs established by their primary stakeholders.

Self-assessment of higher education degrees is a strategic tool employed in the framework of total quality management programmes. Theoretically, self-assessment of higher education studies allows universities to continuously question and improve their management practices and, as a result, the products and services they are offering. Nevertheless, a fundamental event must take place so that theory becomes practise: organisational learning.

Organisational learning facilitates the creation and exploitation of knowledge that, ultimately, may lead higher education organisations to develop new capabilities and abilities that will permit them to face up to today's environments in an efficient and effective way. In other words, organisational learning is a necessary condition so that self-assessment of higher education degrees becomes a successful process and, in this way, all its theoretical benefits and rewards may be attained.

Bearing in mind all these considerations, the research we present here has a twofold objective: we intend to identify those factors that, a priori, may facilitate and/or hinder the process of organisational learning within a context of self-assessment of higher education degrees; but to do so, we need to know how both processes are related one to each other. It is noteworthy that we have not found any previous work linking organisational learning and self-assessment of higher education degrees. Thus, our study has an exploratory nature and may become a first rigorous contribution in this

research area quite unexplored up to now. Though organisational learning is implicitly underlying the application of most of the quality management tools and programmes, there is an important lack of research where the link between organisational learning and self-assessment of higher education degrees has been explicitly analysed.

With respect to the structure of the manuscript, following this introduction we present the theoretical foundations of self-assessment of higher education degrees. Later, we briefly introduce the organisational learning process. In the fourth section, we carry out the joint analysis of self-assessment of higher education degrees and organisational learning processes. The fifth section illustrates the methodological aspects of the research, and the following section describes the main results of the case study analysis. Finally, we put together the main conclusions and implications of the research.

2.- The self-assessment process of higher education degrees

Why is it important to talk about self-assessment of higher education degrees? Self-assessment of higher education degrees is a primary process when a higher education organisation has the intention of guaranteeing the quality of its products/services and processes through the application of a continuous improvement philosophy. In addition, such a process permits the higher education organisation to show this capability, in front of its stakeholders, through the achievement of an accreditation.

Nevertheless, self-assessment was not originally applied in the context of higher education degrees. So, where and why does self-assessment come up? Quality self-assessment is a technique that appears in the field of quality management application. In this arena, several quality management approaches are usually identified, though total quality management (TQM) is the most evolved and known one.

TQM is a managerial philosophy based on the application of quality criteria to the management of all organisational activities, processes, systems and resources. As a result, not only the final customer will be satisfied but also the entire organisation's stakeholders (employees, suppliers,

distributors, shareholders, society, etc.). Thus, it has sense to consider that TQM implies, actually, to manage the whole company with quality criteria, and that is the reason why, nowadays, the expression *TQM* is being replaced by the term *Excellence*. *In this respect*, the quality management reference framework promoted by the European Foundation for Quality Management has changed its name from *European Model on Total Quality Management* to *EFQM Excellence Model*. Also, the quality award promoted by this organisation has modified its name from *European Quality Award* to *EFQM Excellence Award*.

The implementation of such a managerial philosophy rests on the regular and systematic application of an exercise called self-assessment. Through this exercise, organisations may identify their strengths and areas for improvement (Balbastre, 2003; Conti, 1997a). Therefore, self-assessment may be defined as a regular, systematic and global examination of all organisational activities and results, which will be compared to a business excellence model. This exam allows organisations to clearly recognise their strengths and weaknesses, and finally these results will be integrated into the organisational improvement planning process (E.F.Q.M., 2003).

As stated above, organisations need a business excellence model to be compared to in order to carry out the self-assessment process. These models are underlying the quality awards. There are many different quality awards at several levels (local, regional, national and international awards). However, those models underlying the international quality awards (Deming, Baldrige, European and Iberoamerican awards) are used the most. So, business excellence models and self-assessment application are the two sides of the same coin.

Though these models were initially applied by firms, at the moment they are also used by higher education organisations. In this respect, the University of Sevilla (Spain) has employed the EFQM Excellence Model to develop organisational self-assessments, and the University of Alabama (U.S.A.) has carried out self-assessments applying the Malcolm Baldrige model.

Nevertheless, self-assessment using these models considers the *organisation* as the unit of assessment. On the contrary, though several types of assessments (for instance, departmental or

subject evaluations) may be developed in higher education organisations, self-assessment of higher education degrees considers the *degree* as the unit of assessment. As it can be deduced, the process (or exercise) is quite similar but the scope of application is very different (organisation vs. degree). Thus, in the case of higher education degrees, self-assessment may be defined as a process where all the agents with any interest in the organisation (lecturers, organisational academic managers, students, society, employers, etc.) express their opinion with respect to the suitability and effectiveness of some issues relative to the degree in order to identify its strengths and areas for improvement (CEA, 2003).

Nowadays, such self-assessment processes have become of utmost importance in those countries possessing a developed higher education system or under the influence of one of these countries. This is the case of European countries, especially with the Bologna Declaration which has been promoted with the intention of developing a common space of higher education in Europe. As an action line, the Bologna Declaration proposes the homogenisation and compatibility of the set of products and services offered by European higher education organisations through the application of quality parameters. It is also the case of countries such as Costa Rica, a rich and developed Centro American country with a higher education system very influenced by the U.S.A. educational system and structures.

The self-assessment of higher education degrees implies a rigorous process that requires an important effort in the organisation, as well as a significant endowment of resources in order to end it in a successful way. Such a process may be structured in 4 different stages (CEA, 2003): sensitising, planning, execution and final report elaboration.

The *sensitising* stage intends to create in the organisation the climate and positive attitude needed to make the process succeed. Basically, this stage is oriented to the people in charge of the process as well as to the students, lecturers and other academic or administrative staff implied in the degree. The next stage is when the *planning* of all the activities which will have to be developed in the process takes place. Here, the organisation has to endow the necessary resources so as to facilitate the

beginning of the process. Also, it is fundamental to identify those information requirements and inputs that will be employed later during the process.

The *execution* stage is featured by the gathering of the needed information through the tools and systems designed and established in the prior stage. At the same time, the self-assessment team uses such information to assess the quality of the degree according to a reference framework. As a result, partial reports are elaborated in order to show the results obtained with the process.

Finally, when all the elements and criteria of the reference framework have been assessed it is time to elaborate the *final report*. This report contains all the information concerning the appraisal of every criterion of the reference framework. That is, a set of strengths and areas for improvement have to be identified for every criterion (or element) of the reference model. Depending on the specific norms of every higher education organisation, sometimes the final report has to be approved on the part of the Department Board, the School Board, or even the higher hierarchical levels of the university. In addition, this report is usually issued to release the results of the process to all the agents implied in the degree.

3.- The organisational learning process

In today's research arena, many works and publications are interested in the analysis of any issue relative to the learning field. However, two different research lines have been developed in the learning field: the first one is related to the *learning organisation* topics, and the second one has to do with the *organisational learning* issues (Tsang, 1997). The learning organisation literature tries to determine (or prescribe), a priori, those factors and elements that contribute to make organisations learn and, as a consequence, facilitate the achievement of higher organisational performance. On the contrary, the organisational learning perspective tries to describe and understand how the learning process is carried out in organisations (Piccoli et al., 2000). Therefore, the former has a prescriptive approach whilst the latter has a descriptive one (Tsang, 1997).

However, it is necessary to point out that organisations are not capable of learning on their own. The learning capability belongs to individuals, who are able to develop processes of knowledge creation and exploitation that are on the basis of the learning process (Nonaka, 1994).

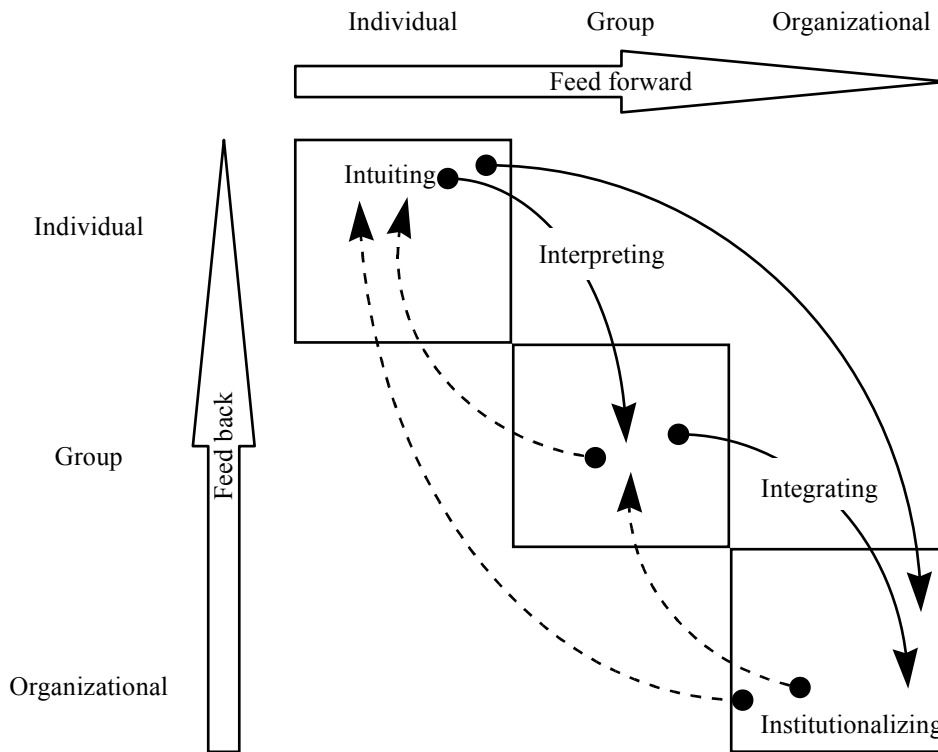
In this research, we agree with Moreno-Luzón et al. (2000) and Balbastre et al. (2003) on considering learning as a process through which new knowledge, abilities and/or attitudes are acquired through lived experiences that generate any change in our way of being and/or acting. Taking this definition as a starting point, we may think that organisational learning is a dynamic and continuous process through which the organisation interprets and assimilates tacit and/or explicit information in order to create knowledge. In the end, this knowledge will modify organisational behaviours and/or routines through which institutional goals are achieved (Balbastre et al., 2003; Moreno-Luzón et al., 2000).

However, organisational learning will only take place if individual learning is amplified to organisational groups and, finally, from groups to the organisation. Thus, group learning is the process through which organisational individuals put their knowledge at the disposal of the rest of the members of the group. In this way, individual knowledge may be tested and discussed in the bosom of the group, generating, as a result, different knowledge which is accepted, assumed and belongs to the group (Zietsma et al, 2002).

Several theoretical frameworks have been developed to try to explain the organisational learning process. Nevertheless, in this study we are going to employ the model proposed by Crossan and her collaborators (Bontis et al, 2002; Crossan et al, 1999; Vera and Crossan, 2004). Two basic reasons have helped us to select this model: a) the simplicity on the exposition of concepts and contents; and b) the explicit introduction of the group level as the link between individual and organisational levels.

This model (see figure 1) establishes that the learning process takes place in three different ontological levels (individual, group and organisation) and through the application of four learning sub-processes (*intuiting, interpreting, integrating* and *institutionalising*).

Figure 1.- Organisational learning as a dynamic process



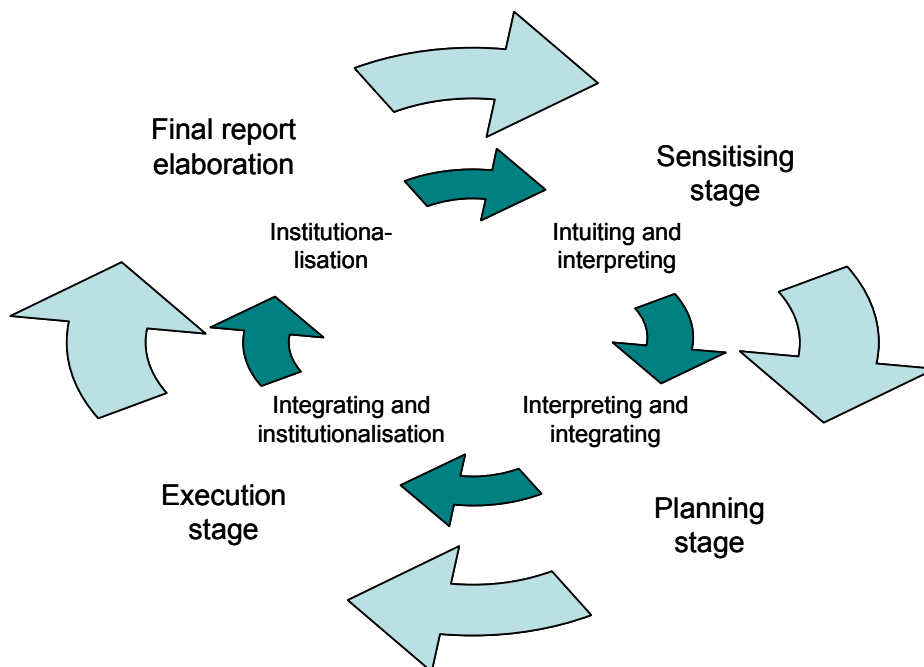
Source: Crossan et al., 1999: 532

4.- Learning in the self-assessment process of higher education degrees

It is not strange to think that some kind of learning is developed when a process of self-assessment of a higher education degree is being carried out. But, how are both processes interacting one with each other? And, which are the factors that may foster or slow down such an interaction?

The specialised literature (Aly, 1997; Balbastre and Moreno-Luzón, 2003; Balbastre, 2006; Barrow, 1993; Blazey, 1997; Conti, 1997b; Counwenberg et al., 1997; Davis, 1992; DeBaylo, 1999; Dervitsiotis, 1998; DiBella, 1997; Ford and Evans, 2001; Hackman and Wageman, 1995; Hertz, 1997; Love *et al.*, 2000; Roth, 1996; Sitkin, Sutcliffe and Schroeder, 1994; Svensson and Klefsjö, 2000; Ulrich, Von Glinow and Jick, 1993) has not analysed this phenomenon yet. Thus, this research acquires an exploratory nature and the establishment of an initial theoretical relationship between self-assessment of higher education degrees and organisational learning is mainly based on our personal experience and a deep personal thought. Figure 2 illustrates such a relationship.

Figure 2.- Organisational learning in self-assessment of higher education degrees



At the *sensitising* stage it is necessary to carry out several qualification activities in order to train academic staff in those aspects related to the process they are about to begin (CEA, 2003). Here, it is of utmost importance the role developed by intuition and interpretation, since sensitising has an important effect on the subconscious through the construction of mental maps and the vocabulary necessary to communicate with other people.

Learning goes on with *interpreting*. It could be said that interpreting becomes the bridge linking sensitising and planning in the self-assessment process, as the knowledge acquired will enable individuals to build concepts, hypotheses and theories, among other things, which are fundamental for the planning stage. Also, the exchange and socialisation of individual ideas in the group context will permit the construction of a collective knowledge that will be concreted in the self-assessment plan. In other words, the self-assessment plan is the result of a knowledge *integration* process.

Such knowledge integration will go on to the execution stage of the self-assessment process. There must be a consensus with respect to how information is going to be collected, how data are going to be processed, and how partial reports are going to be elaborated. In addition, it is also primary that all the changes derived from partial reports are agreed prior to their implementation.

Finally, we reach the *institutionalisation* stage, where the learning of all the groups begins to filter through all the activities of the organisation. Institutionalisation embraces both execution stage and elaboration of the final report. All the changes derived from the final self-assessment report must be consented by all the higher education organisation levels, since their implementation will affect the entire organisation to a lesser or greater extent.

With regard to those factors affecting, positively or negatively, the organisational learning process during a self-assessment of a higher education degree, the specialised literature has revealed that an important gap exists in this respect. Therefore, we have developed an initial proposal bearing in mind our personal experience in the topic and some works analysing those factors influencing management self-assessment or organisational learning processes (Ford et al., 2004; Samuelson and Nilsson, 2002; Van der Wiele and Brown, 1999; Dale et al., 1997; Mann and Kehoe, 1995; Coetzer,

2006; Pham and Swierczek, 2006; Zietsma et al., 2002; Larsen et al., 2002; Ellinger et al., 1999; Srikantia and Pasmore, 1996; Dodgson, 1993). Table I illustrates our proposal.

Table I.- Factors conditioning the organisational learning in the self-assessment of higher education degrees

Factor	Facilitator	Obstacle
Decision of the organisation (university)	X	
Organisational culture	X	X
Continuous development of the staff	X	
Organisational structure	X	X
Leadership style	X	X
Policies of the organisation (university)	X	X
Relationship organisation-environment	X	

The *decision of the organisation (university)* may be considered a facilitator of organisational learning. There must be an organisational consensus with regard to the development of a self-assessment process of any degree, since self-assessment results may affect not only a specific degree, school or department, but also the entire organisation.

The *organisational culture* may act both as a facilitator and as an obstacle to the learning process. A set of values such as transparency, sharing of knowledge, teamwork, cooperation, focus on the student, and so on, will contribute to the establishment of an internal climate which will facilitate the learning process during the self-assessment. On the contrary, a negative culture based on selfishness and resistance to the change of the status quo, among other values, will hinder such a learning process.

The *continuous development of the staff* has to do with the necessity of implementing a well-planned and agreed process of training and development of the staff. According to CEA (2003), this

factor becomes a fundamental cornerstone in a successful self-assessment process of a higher education degree.

When we make reference to the *organisational structure* we assume that it is necessary for the organisation (university) to possess mechanisms that guarantee a fluent communication in the organisation. In the case that such mechanisms do not exist, the organisation will have to create them. Likewise, sometimes it will be needed to carry some structural arrangements out acting on design variables such as departmentalisation, department size, coordination and linkage mechanisms, information flows, and authority flows (Guevara et al., 2004). The existence (or lack) of a suitable organisational structure may facilitate (or hamper) the learning process.

The *leadership style* is related here to the management of labour relationships and the coherence among the objectives of employees, the director/coordinator of the degree, and the organisation as a whole. In this respect, a participative style may foster the learning during the self-assessment process whereas an authoritarian style may obstruct such a process.

Another important factor to be considered is the set of *policies of the organisation (university)*. It is primary to bear in mind the degree of compatibility between the organisational policies and the final results derived from self-assessment. That is, if final self-assessment results imply the establishment of a new organisational scenario pretty different from the current organisational situation, probably the existing policies of the organisation will act as a barrier to organisational learning.

In addition, it is essential to analyse the extent to which motivation, development and training policies are fostering the participation of individuals in self-assessment of higher education degrees. Also, it is fundamental to study the financial policies of the organisation, since it is of utmost importance to endow the degree with the necessary resources to successfully develop the self-assessment process.

Finally, the *relationship organisation-environment* may be considered a facilitator of the organisational learning process in self-assessment of higher education degrees. An organisation that

keeps a tight relationship with its environment (through interorganisational cooperative projects, R&D projects, consultancy projects, participation in conferences and meetings with experts, or publication in academic journals, among others) is likely to have established environmental surveillance mechanisms with respect to those technologies and knowledge that are available in its area of speciality. Therefore, this kind of organisation is more prone to the exchange of knowledge and to the development of self-assessment processes and learning programmes compared to those organisations that do not have carried out this kind of environmental relationship. In this sense, the fact of having kept relationships with the external stakeholders allows organisations to develop a culture oriented to continuous change and improvement. This type of culture becomes a key factor for learning and self-assessment processes.

5.- Research methodology

According to Hurley (1999) and Sofaer (1999), qualitative methodology is useful in order to construct or develop new theory, conceptual frameworks or hypotheses. On the contrary, Miquel et al. (1997) state that quantitative research methodology requires a previous and soundly-based theoretical framework. This theory has to allow the researcher to define in a specific and measurable way the set of concepts to be analysed. Thus, bearing in mind the shortage of theoretical approaches (specifically, works that jointly study organisational learning and self-assessment of higher education degrees) supporting our research proposal, we have opted for a qualitative research methodology.

As a research strategy, we have selected the case study methodology. Such a methodology is suitable when (Bryman 1988; Hartley, 1994; Hurley 1999; Lee 1998; Marshall and Rossman 1995; Meredith 1998; Shortell 1999; Skinner, Tagg, and Holloway 2000; Sofaer 1999; Yin 1989): a) the research objective is related to the exploration of new processes or behaviours (or processes or behaviours that are not much studied); or b) it is important to understand social processes in its very organisational and environmental context. This fact will lead to a better understanding of the associations among the variables and, also, will consider the participants' viewpoint.

Finally, Yin (1989, 1993) recommends the use of an exploratory case study as a suitable research strategy. More specifically, Yin (1993: 5) states that exploratory case study “is aimed at defining the question and hypotheses of a subsequent study or at determining the feasibility of the desired research procedures”. In this respect, we may assume that the research presented here has an exploratory nature.

When the case study methodology is applied, two main decisions have to be made (Yin, 1989): the selection criteria and the number of cases to be analysed. With respect to the first decision, the selected case should have developed some process of self-assessment of higher education degree, since this is the phenomenon that we intend to study. In this respect, it would be great that the selected case had experienced a failed self-assessment process prior to the successful one. In this way, the level of experience in the application of self-assessment technique is higher and the degree of learning will be too. Moreover, the fact of having experienced a failed process and later a successful one will allow the researcher to carry out a comparative analysis in order to identify *how* factors and processes have evolved. In addition, it would be helpful that the researcher has an easy access to the information of the case.

Concerning the second decision, we have chosen one unique case, since our intention is to achieve a deep knowledge of the phenomenon to be analysed instead of developing any kind of statistical generalisation.

The selected case is the Degree of Agronomy Engineering of the TICR (Technological Institute of Costa Rica). This degree has to belong to a public university of Costa Rica, as public education organisations are more valued and have a higher reputation than private ones. Currently, Costa Rica has 76 universities, 4 are public organisations (CONARE, 2007) and 72 are private ones (CONESUP, 2007). At present, only 56 of those private universities are activated. Public universities have clearly a better reputation, in terms of quality, than private ones, basically due to the fact that the duration of the degrees in public universities (5 years) is higher than in private ones (2,5 or 3 years). Private universities have eliminated any basic or humanistic content from their degrees, concentrating

only on specific subjects. Additionally, and compared to public universities, private ones are considerably young (the first one was founded in 1982, and it was the only one until 1995). Also, the establishment of a private university only implies the creation of a foundation. On the contrary, the establishment of a public university implies a more demanding process, since it requires the enactment of new laws, guarantee of resources, etc.

The data gathering process took place through several techniques and was developed in 2005. Semi-structured personal interviews and direct observation were the main tools employed. Some people in charge of the self-assessment process were interviewed, as well as students, lecturers and other academic or administrative staff involved in the degree. Concretely, six people were interviewed, namely, the Director of the School, the two different managers responsible for the self-assessment process, one member of the self-assessment committee, one lecturer and one member of the administrative staff. The interviews with the Director and the two managers lasted for two hours each, and afterwards a joint meeting of two hours with these three people was carried out in order to triangulate their opinions. The rest of the interviews lasted for 40 minutes each.

Besides, varied documents and reports of the organisation were analysed in order to triangulate the information. In this sense, we consulted the self-assessment partial and final reports, the minutes of the School Board and also the minutes of the self-assessment committee.

6.- Case study: the Degree of Agronomy Engineering

In this section we are going to analyse comparatively the successful and unsuccessful processes of self-assessment of the DEA. In this sense, firstly we are going to study how the process of self-assessment took place; later we will analyse the organisational learning process derived from the self-assessment application; after that, we will carry out a joint study of self-assessment and organisational learning processes; and finally, we will compare how the set of factors identified as a result of the literature review are affecting the successful and unsuccessful self-assessment processes.

The Degree of Agronomy Engineering (DAE) is one of the oldest degrees in the Technological Institute of Costa Rica (TICR). The creation of the School of Agronomy in the TICR was approved in October of 1975. This School is responsible for managing the DAE. The academic activity began in the first semester of 1976. The plan of studies was changed to create a 4-year degree with 144 credits.

The objectives of the DAE, approved in 1996, were the following:

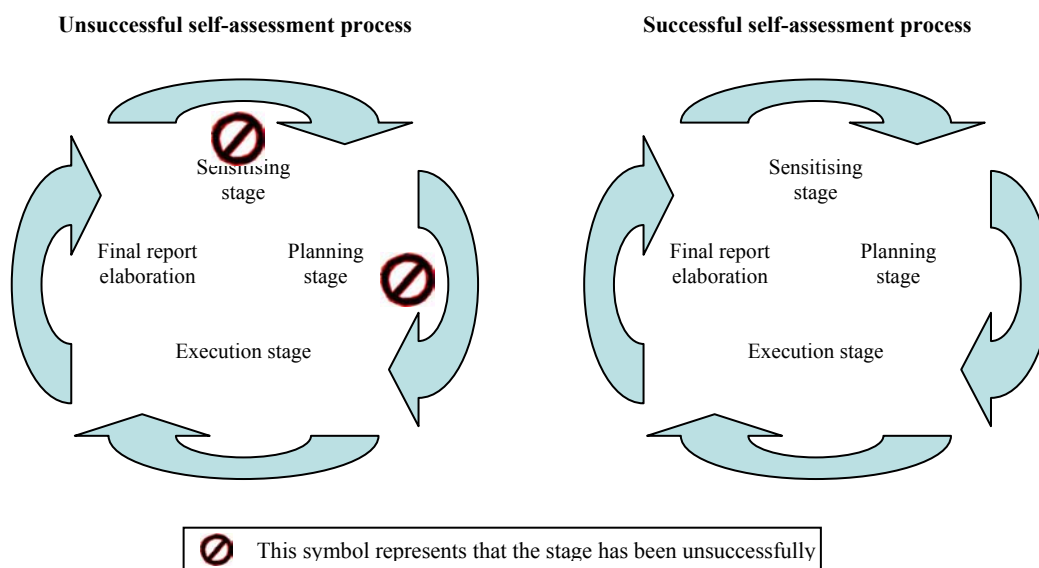
- To train a critical, conscious and creative professional, able to cope with the particular situation of the agricultural sector in order to make it more dynamic.
- To develop a learning process with both theoretical and practical knowledge, with a learning-by-doing strategy that allows the students to put into practice those capabilities that will be desirable in their future jobs.
- To generate new technology or adapt the existing one to the social and economic changes of the sector in Costa Rica.
- To contribute to the development of the agricultural sector in the region of North Huetar through technology transfer. This would be a consequence of the learning process developed in the DAE.

6.1.- Analysis of the self-assessment process

As stated in the second section of this work, the self-assessment of higher education degrees is a process consisting of four different stages, namely, sensitising, planning, execution and final report

elaboration. Figure 3 illustrates the comparison between successful and unsuccessful self-assessment processes.

Figure 3.- Comparison between successful and unsuccessful self-assessment processes



As we stated above, the self-assessment process should begin with a sensitising phase, creating a positive attitude and encouraging personal thought. In the unsuccessful case, the Centre for the Academic Development (CEAD) was responsible for the development of the *sensitising stage*. The process was headed by one of the academic consultants of that Centre. However, this process was developed without previous consultation to the staff linked to the Degree.

On the contrary, in the successful case the sensitising stage was started with the establishment of a committee where all the groups implied in the Degree (academics, administrative staff and students) were represented. Since the framework employed for the self-assessment of the DAE was the model proposed by SINAES, the committee was trained in all the elements and criteria of such a model. Later, all the public officials working in the School of Agronomy Engineering were also trained in order to facilitate their participation in the process and their understanding of the important

topics. As a result, all the sectors that integrate the School understood the importance of the project and took part actively in the working groups that were created.

With regard to the *planning* stage, in the unsuccessful case it was not developed jointly by members of both the CEAD and the School of Agronomy. On the contrary, that planning process was carried out by the CEAD. Additionally, the training plan was mainly focused on the SINAES¹ criterion referred to the plan of studies, setting apart the rest of criteria. The head of the process was an academic consultant belonging to the CEAD. This person adopted the role of the “manager” of the process applying an authoritarian style, instead of developing tasks of coordination and cooperation. The participants from the part of the Degree only received the information from the manager (in a top-down relationship). Consequently, there was no empathy and participants were not keen on the process.

On the other hand, in the successful case the planning stage was carried out from a proposal made by the committee mentioned before. The planning process was developed through several meetings, where tasks were assigned according to the criteria of the SINAES model. Each member of the committee was in charge of coordinating a set of tasks² and, finally, a calendar was established for the implementation of the tasks. The School Board approved the final plans and the necessary resources were assigned to the project. Thus, we may state that this stage was ended successfully.

The third stage is the *execution* stage. In the unsuccessful case, the execution of self-assessment was focussed on the development of different instruments to modify the plan of studies. The School Board was responsible for this stage, generating the final report without developing partial reports.

In the successful case, this stage started with the capture of the information relative to the Degree. Concretely, information was obtained from students, employees, lecturers and graduates. This

¹ The SINAES model was the framework employed to self-assess the DAE. Such a model consists of 6 basic criteria: academic staff, plan of studies, students, infrastructure and equipment, administration, and impact (SINAES, 2002).

² The development of the self-assessment needed, previously, that specific information relative to the different criteria of the SINAES model was gathered and analysed. So, the members of the committee had to coordinate the collection and analysis of information for the criterion/criteria that they were responsible for.

information was not located in a specific place, and that's why an important effort was made in order to find all the documents needed for the self-assessment. Also, partial self-assessment reports were elaborated as the process was going on. These reports were known by all the members of the Degree and were even discussed with people from other departments and degrees. All the objectives that had been established for this stage were accomplished. So, the execution stage was successfully developed.

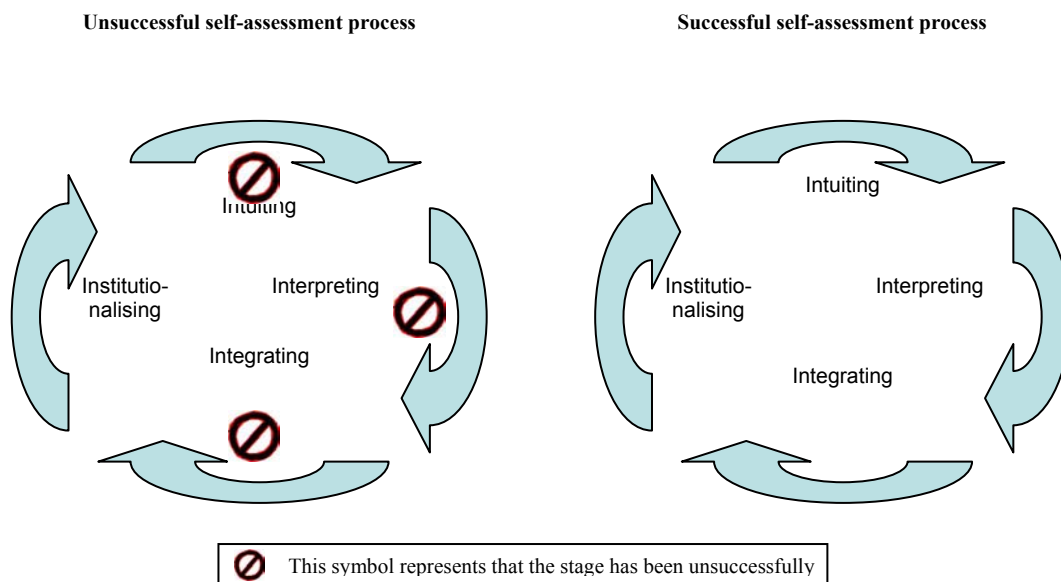
The final stage in a self-assessment process is the *final report elaboration*. This report should integrate an improvement plan, embracing all the areas included in the SINAES model. In the unsuccessful case, on the contrary, this report only incorporated some changes concerning the plan of studies, but no other changes took place in other areas of the Degree or in the management of the School.

In the successful case, the final report was elaborated by the committee and approved by the School Board. In addition, such a final report had to be presented in front of the TICR Board since the improvement plan implied the endowment of resources to get better laboratories, computers and machinery, among other things. Furthermore, this improvement plan not only raised some changes in the School procedures but also in some other units of the TICR. So, the scope of the improvement plan is far broader than in the unsuccessful case.

6.2.- Analysis of the organisational learning process

According to the theoretical framework employed in this research (section 3), the organisational learning process implies the development of four different stages: intuiting, interpreting, integrating and institutionalisation. Figure 4 shows the comparison between the successful and unsuccessful cases.

Figure 4.- Comparison between successful and unsuccessful organisational learning processes



With respect to the organisational learning process, *intuiting* is strongly based on the existence of the necessary knowledge so that people are able to understand and know how to develop the self-assessment process on their own. In the unsuccessful case and according to the School Director and the coordinator of the self-assessment committee, the academic consultant developed an unsuccessful training process. Conferences were held during the School meetings, and consequently, they were compulsory. This fact caused a bad feeling among the School participants who reacted losing their interest on the process.

On the contrary, in the successful case the intuiting stage was carried out through a set of study meetings. In these meetings, all the sectors implied in the Degree (managers, lecturers, students and administrative staff, mainly) were encouraged to take part and were trained in the self-assessment process. This fact contributed to cause a change in people's attitude in front of the process, as they had acquired specific knowledge and they were able to understand in a better way the relevance of developing a self-assessment process.

With respect to the second and third stages (*interpreting* and *integrating*), in the unsuccessful case people were discouraged about the self-assessment process and, consequently, it was difficult to

create the necessary conditions for the internalisation of knowledge. As a result, the interpreting stage was not developed. This stage should have created changes in the participants' behaviour, developing better ways of communication and an improvement of the self assessment process. These capabilities were not generated and, therefore, the process of knowledge *integration* at individual and team levels didn't take place.

On the other hand, in the successful case knowledge interpreting was achieved thanks to the establishment of working committees to plan and implement the necessary tasks. Also, knowledge sharing was accomplished to a great extent. For instance, we witnessed to the fact that even farm labourers who work for the School of Agronomy Engineering may easily talk about the self-assessment process and all the work that has been made. In its turn, the integrating stage was mainly based on the application of teamwork, both through study meetings and working committees. Here, it became fundamental to unify criteria in order to discuss partial reports and, according to the academic consultant, this fact contributes to explain the great uniformity that students, academic and administrative staff, acquired about the analysed and discussed issues.

Finally, the *institutionalising* stage turned out to be developed correctly in the unsuccessful case, since changes in the plan of studies were generated. But this knowledge was not transmitted from the team level to the institutional one. On the contrary, this knowledge had its origin in the work carried out by the School Director, who presented it to the School Board that approved the proposal. Nevertheless and despite the institutionalisation stage, the learning that took place could not be considered as an organisational learning process.

In the successful case, changes derived from the final report not only affected the teaching activities but also administrative tasks and the set of departments that have any relationship with the Degree. Concretely, those changes included, among other issues, activities such as specific training in

those areas that the self-assessment report had revealed as necessary, as well as update-of-knowledge events that affected lecturers implied in the Degree.

6.3.- Joint analysis of self-assessment and organisational learning processes

Up to now, we have analysed separately both processes. In this subsection, we are going to analyse them with a joint perspective. The links between *intuition and sensitising stages* will depend on the degree of training offered and on the ability to encourage people to generate new ideas in order to improve or solve their problems. In the unsuccessful case, this link was not established as the participants did not find any coherence between the compulsory training they had received and the real contribution of the self-assessment process. They did not receive the necessary tools in order to understand the importance of introducing a self-assessment process and, consequently, they became dissatisfied and disappointed.

However, in the successful case a well-defined programme of topics concerning the self-assessment process, educational management and the design of the plan of studies, contributed to the creation of a great interest in the self-assessment of the Degree and to the fact that people wished to take part in such a process. In this way, we may assume that both stages were strongly correlated due, mainly, to the training programme.

In the unsuccessful case, behaviour patterns were not generated in participants. That would have permitted to establish the proper vocabulary and mental structures that would have facilitated the beginning of the *planning stage and the interpretation* of knowledge. In addition, the planning process was exclusively delegated in the academic consultant and, as a consequence, the different sectors that were linked to the School were not involved.

Also, a link between the *execution and the integration* stages should have taken place, as we stated in the theoretical framework. Under such a context, groups that participate in the self-assessment process tend to share and integrate knowledge. However, in the unsuccessful case things happened in a different way. The School Director assumed the execution of the process. Thus, groups

did not participate in the execution stage and, as a result, the collective action needed for the knowledge sharing and integration did not take place.

With respect to planning, interpreting and integrating stages in the successful case, we consider that academic and administrative staff had accurate information relative to the process and, as a consequence, they got to integrate it with their knowledge. This fact contributed to the establishment of working groups and the creation of a plan of work agreed and known by all the members of the degree. Integrating is also related to the execution phase. Basically, integration became evident in the approval of partial reports. Such reports were not discussed and approved by working committees but by the School Board.

With respect to the *final report elaboration and institutionalisation stages*, in the unsuccessful case this link does exist as long as changes proposed in the final report caused modifications in the institutional norms and procedures. In this case, we could only observe partial results, as those changes simply affected the plan of studies and obviated other important areas of the management of the School.

On the other case, the successful one, the final report contained changes that affected not only the Degree but also the whole organisation. Therefore, we consider that the relationship between both processes is evident, since the scope of changes goes beyond norms, policies or procedures of the Degree, affecting the institutional level.

6.4.- Joint analysis of facilitators and obstacles

In this section we are going to analyse those factors that affect the learning process in the context of the self-assessment process of the DAE. Table II summarises the results.

Table II.- Factors affecting organisational learning in the context of the self-assessment process of the DAE

Factor	Unsuccessful case		Successful case	
	Facilitator	Obstacle	Facilitator	Obstacle
Decision of the organisation (university)			X	
Organisational culture		X	X	
Continuous development of the staff	X		X	
Organisational structure		X		X
Leadership style		X	X	
Policies of the organisation (university)		X	X	
Relationship organisation-environment	X		X	

As table II shows, organisational structure is the unique factor remaining as an obstacle in both cases, as no structural changes took place in order to facilitate the self-assessment process. The decision of the organisation appears and acts as a facilitator in the successful case; also the continuous development of the staff and the good relationship with the environment facilitate the process in both cases. On the other hand, the organisational culture, the leadership style and the policies of the organisation have modified their sign as conditioning factors. All of them have changed from being clear obstacles in the unsuccessful case to becoming facilitators of the process in the successful case, in this way contributing to the success of the self-assessment process. Below, we analyse in depth all these factors and their behaviour in both cases.

With respect to the *decision of the organisation*, participants in the unsuccessful case suggested that there was not a clear decision about the need of initiating a self-assessment process. The decision to carry out a self-assessment process was made by the School of Agronomy, and it was

intended to use a national or international Accreditation Agency. The TICR had not a formal and defined decision in this respect, but TICR managers were not in opposition to the self-assessment as the results could potentially improve the performance of the School. So, bearing in mind these considerations we may state that this factor was neutral, since the TICR was not against the process but didn't make an explicit decision about it.

In the successful case, however, we have to point out that the accreditation process took place once the new Vice-Chancellor modified some institutional decisions. One of those changes affected the self-assessment process, as he decided to support it. With respect to the process of resources endowment, the TICR prioritised those degrees that had initiated the self-assessment process. We consider that this change in the institutional decision contributed to facilitate the organisational learning process.

DAE's *organisational culture* is very particular, because of its decentralisation and specific environment. The professionals linked to this School have a quite different culture compared to those people related to the rest of the TICR.

As stated before, the implementation of self-assessment in the unsuccessful case was not an agreed initiative. Therefore, tasks derived from this process were seen as extra-work and self-assessment was perceived as an imposed process. Also, the imposed training process and its inclusion in the School Board meetings generated resistance to the process, and most of the School members did not get involved in it. Hence, the richness of the sharing of specialised experiences was not experimented, the generation of organisational learning was inhibited and, as a result, we may consider that this factor became a barrier or obstacle to the process.

On the contrary, the organisational culture became a facilitator for the learning process in the successful case. In this second attempt, a culture of participation was spread among the School members. In this case, it was of utmost importance the training activities that were carried out, since training contributed not only to modify aptitudes but also attitudes.

With concern to the *continuous development of the staff*, we consider that it became a facilitator for the organisational learning process in both cases. In the unsuccessful case, the academic personnel of the School had the highest qualifications in the TICR. Also, they were specialised lecturers and had the highest ratio of research interchange, at a national and international level. One of the priorities of the School was to achieve an active training policy; hence academic personnel were receptive to the new training initiatives. Consequently, self-assessment was understood as an interesting project at the beginning.

Though we have previously mentioned that organisational culture becomes an obstacle for the self-assessment process (basically, due to the fact that training activities were imposed to the personnel of the School), the high level of personnel qualification facilitates the openness needed to carry out the exchange of knowledge required in any continuous improvement process. Therefore, the continuous development of the staff is, considered in itself, a facilitator for the self-assessment process.

In the unsuccessful case, the spirit was the same as in the former period, namely, encouraging the participation in every training activity. Explicitly, the objective of continuous training was included in the improvement plan derived from self-assessment. Therefore, this factor contributed importantly to the learning obtained as a result of self-assessment.

In the unsuccessful case, the *organisational structure* did not suffer any change in this period of time. For instance, integrating roles, project teams or other coordination mechanisms should have been created in order to drive and facilitate the process. These mechanisms are integrated in the formal organisational structure, but design literature recommends the use of this kind of coordination mechanisms to more decentralised structures, such as matrix organisations, lateral organisations or other new organisational forms.

Although universities are quite decentralised organisations, any of these mechanisms were not established in the case of the School of Agronomy, basically due to a lack of human resources. As a

result, the absence of this kind of coordination elements, which would have facilitated the information flow and control, turned into a strong obstacle for the organisational learning process.

In the successful case, at first there were no changes in the organisational structure. But after reviewing the self-assessment final report, we observed that some permanent working teams were created. These teams acted as coordination and control mechanisms for the development of the different activities, but also implied changes in the structure of the School and in the information flows.

Leadership style is an important element for the development of a self-assessment process, especially when we know that this process has a strong influence in the strategic plan of the School. People in charge of the self assessment process should be able to integrate all the different existing goals: individual, collective and goals of the Degree.

However, in the unsuccessful case the leadership style did not contribute to reach such integration due to two main reasons: a) there was a change in the senior manager of the process (the Director of the School), with the subsequent change of the leadership style; and b) neither of the leaders (Directors) had a leadership style that facilitated the process of organisational learning. The first leader was authoritarian, trying to impose his ideas continuously. The second one was a very good professional (in terms of his experience, research and reputation in the School), but with a very passive style on managing the School. Additionally, this second leader assumed the self-assessment as an individual project and, in doing so, set aside all the potential contributions of all the people linked to the Degree. In any case, the leadership style became a clear obstacle for the organisational learning process.

In the successful case, the School Director was perceived as an excellent leader. He was able to deal perfectly with the different agents involved, and he was participative, assertive and direct, and able to make quick and effective decisions. These leadership characteristics made us consider the leadership style as a facilitator for the learning process.

The empirical analysis revealed some problems with respect to the *policies of the organisation (University)* in the unsuccessful case. The TICR did not implement any specific policy to facilitate the development of the project. For instance, human and financial resources were endowed from the School budget, without any other additional aid. Consequently, organisational policies may be considered as an obstacle for the organisational learning process.

Nevertheless, some relevant changes took place in the policies of the organisation in the successful case. Such changes permitted the Degree to get the necessary financial and human resources for the development of the project. Some of these measures were the following: changes in the assignation of work responsibilities, or some payments or compensations coming from the Accreditation Agency.

Finally, the *relationship organisation-environment* became quite important in the unsuccessful self-assessment process, not only due to the training interchange programmes but also because of the research generated in the School. This School had generated more than 50% of the global research of the TICR. For instance, the Academic Productive Projects developed by the School were considered a “best practice” for the community where the School is located. The development of these projects involved a lot of members of the School. Also, these projects were benchmarked due to their high level of excellence. Hence, participants in such projects were conscious of the importance of knowledge sharing and were used to work in a continuous improvement atmosphere. That is the reason why this factor could be regarded as a facilitator of the organisational learning in this case.

On the other case, the successful one, the relationship organisation-environment was reinforced with the incorporation of some activities for a professional knowledge updating, as well as with the purpose that every research project had to be culminated, at least, with a paper in a scientific journal. Such measures contributed to trigger the organisational learning process.

7.- Conclusions and implications

This paper is a first attempt to develop an empirical approximation, through a qualitative and exploratory research, to the link between two topics that, up to the present, had not been studied jointly, namely, the self-assessment of higher organisation studies and the process of organisational learning.

As it has been shown through the empirical work, it is fundamental that an organisational learning process takes place if it is intended that self-assessment turns out to be successful. But, also the organisational learning becomes an outcome of a successful self-assessment process. In this way, organisational learning becomes simultaneously a conditioning factor and a result in a successful self-assessment process. This conclusion is supported by the specialised literature on organisational learning, since some authors consider that learning can be considered both a process and an outcome (Argyris and Schön, 1996; Dodgson, 1993; Nicolini and Mezner, 1995).

In the unsuccessful self-assessment case, most of the organisational learning subprocesses did not take place. Concretely, intuiting, interpreting and integrating subprocesses were truncated due to several reasons and causes. As a result, organisational learning did not happen and the self-assessment process did not succeed.

On the other hand, our theoretical review suggested the existence of 7 factors that could contribute to facilitate the organisational learning process in the context of self-assessment of higher education degrees. After the empirical analysis, some of them (continuous development of the staff and the relationship organisation-environment) have become powerful facilitators of the process in both empirical cases, whereas the stagnation of organisational structure has always turned out to be an important obstacle. Anyway, it is noteworthy that most of these factors (organisational culture, leadership style and policies of the organisation) change their effect on the learning process depending on the fact that self-assessment is successful or not.

Bearing in mind the considerations exposed above, an important implication emerges for higher education managers. The achievement of a high performance and learning in the self-assessment of any degree requires: a) an explicit favourable decision on the part of the university; b)

an organisational culture based on values such as participation, knowledge sharing and empowerment; c) a clear and defined human resources policy supporting the continuous training and development of the staff; d) the establishment of the necessary structural adjustments to facilitate the flow of information and knowledge, to make individuals involve in the process and to assign defined responsibilities and duties to all the participants in the process; e) a participative, assertive and transparent leadership style; f) a set of organisational policies that support the whole process from every viewpoint (human, financial, technical, etc.); and g) an open and constant relationship between the organisation and its nearby environment to facilitate the interchange of knowledge and to question constantly the organisational processes and practices as a basis for continuous improvement.

In addition, academicians may find in this research a first theoretical framework to serve as a basis for future investigations. In this sense, much work is still remaining since our research is exploratory. It is needed to find new linkages between both processes and to identify new factors that could contribute to enable the organisational learning in self-assessment of higher education degrees. In this sense, it would be wise to make two factors of the current *organisational structure*: one referred to the institutional level (institutional structure) and other one related to the school level (school structure).

Also, the relationships that have come up in this research need to be formally hypothesised and tested. To do so, it is previously necessary to carry out some additional case studies in order to analytically generalise, through the replication logic, the results obtained in the first case (Yin, 1989 and 1993).

Finally, this research is not free from limitations, many of them derived from the exploratory nature of the study. We have only based the organisational learning process on the model by Crossan and her colleagues. More learning models need to be consulted and incorporated. Furthermore, more significant cases could be added to research as mentioned above. And, to end up with, qualitative studies do not permit statistical generalisation. Thus, an important effort has to be made to establish clear hypotheses and to test them through a quantitative research.

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